

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	09/954571	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/02/06 09:50
L2	45	Chien Kenneth	US-PGPUB; USPAT; EPO; JPO; DERWENT	NEAR	ON	2006/02/06 09:51
L3	1	(ikedata NEAR yasuhira) and Kenneth	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/02/06 09:51
L4	236	phospholamban	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/02/06 09:51
L5	56448	gene therapy	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2006/02/06 09:51
L6	254799	cardiac heart cardio\$5	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/02/06 09:51
L7	92	L4 and L5 and L6	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/02/06 09:51
L8	6	L7 and phospholamban.clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/02/06 09:52
L9	8	phospholamban mutant	US-PGPUB; USPAT; EPO; JPO; DERWENT	NEAR	ON	2006/02/06 09:52
L10	9	(US-20020032167-\$ or US-20030050259-\$ or US-20030166593-\$ or US-20040121942-\$ or US-20040191802-\$).did. or (US-6174871-\$ or US-6416510-\$ or US-6716196-\$).did. or (WO-200025804-\$).did.	US-PGPUB; USPAT; DERWENT	OR	ON	2006/02/06 09:52

=> d his

(FILE 'HOME' ENTERED AT 10:12:07 ON 06 FEB 2006)

FILE 'MEDLINE, AGRICOLA, CAPLUS, SCISEARCH, BIOSIS' ENTERED AT 10:12:22  
ON 06 FEB 2006

L1 6204 S PHOSPHOLAMBAN  
L2 127774 S GENE THERAPY  
L3 9701 S L2 AND (HEART OR CARDIAC OR CARDIO?)  
L4 92 S L1 (L) L3  
L5 63 DUP REM L4 (29 DUPLICATES REMOVED)  
L6 21 S L5 AND PY<=2000  
L7 21 SORT L6 PY  
L8 3 S L7 AND MUT?  
L9 0 S L1 AND S16E  
E IKEDA YASUHIRO?/AU  
L10 271 S E1  
L11 11 S L10 AND L3  
L12 9 DUP REM L11 (2 DUPLICATES REMOVED)  
L13 9 FOCUS L12 1-

=> d an ti so au ab pi l13 1 3 6 9

L13 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 2004:522697 CAPLUS  
DN 141:272021  
TI Development and prospect of **gene therapy** of  
**heart failure**  
SO Kemikaru Enjiniyaringu (2004), 49(6), 427-432  
CODEN: KEENAT; ISSN: 0387-1037  
AU Ikeda, Yasuhiro; Yamada, Michio; Matsuzaki, Masunori  
AB A review. Advantage and disadvantage of general viral and non-viral  
genetic vectors were first discussed. Gene introduction procedures especially  
developed for **cardiac** myocyte transfection were then discussed.  
The procedure included steps of lowering body-temperature, temporal  
**cardiac** arrest, histamine administration, viral vector  
administration and heartbeat initiation completed in 5 .apprx. 6 min.  
Potential applications of the procedure to **gene**  
**therapies** for dilated **cardiomyopathy** and chronic  
**heart failure** were discussed. Dystrophin-associated  
 $\delta$ -sarcoglycan gene, BARK ( $\beta$ -adrenergic receptor kinase)  
inhibitor gene and SERCA2a gene were described as candidate transgenes  
that would be introduced in the **gene therapies**.

L13 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 2002:185693 CAPLUS  
DN 136:242914  
TI High efficiency **cardiac** gene transfer with adeno-associated  
virus vectors and uses in **gene therapy** for  
**cardiac** diseases  
SO U.S. Pat. Appl. Publ., 12 pp.  
CODEN: USXXCO  
IN Chien, Kenneth R.; Hoshijima, Masahiko; Ross, John; Ikeda, Yasuhiro  
AB The present invention discloses methods for the delivery of genes to  
improve **cardiac** function including the use of adeno-associated  
virus (AAV) vectors, isolation of the **heart** from systemic  
circulation, and induction of hypothermia/**cardiac** arrest. The  
methods result in high-level, long-term expression of reporter genes and  
enhanced **cardiac** function in hamster models of **heart**  
disease. In particular, the gene expression via AAV vectors is highly  
restricted to **cardiac** muscle and maintained long-term, with no  
sign of myocardial inflammation. Transfer of a gene for a dominant neg.  
form of phospholamban enhanced the contractility in the **heart** of  
hamsters, suppressing **heart failure** by enhancing the function of  
sarcoplasmic reticulum calcium ATPase 2.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002032167	A1	20020314	US 2001-954571	20010911
	CA 2422078	AA	20020321	CA 2001-2422078	20010911

WO 2002022177 A2 20020321 WO 2001-US29103 20010911  
 WO 2002022177 A3 20021128  
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
 CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,  
 HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,  
 LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,  
 SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU,  
 ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,  
 BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 AU 2001091063 A5 20020326 AU 2001-91063 20010911  
 EP 1317289 A2 20030611 EP 2001-971139 20010911  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

- L13 ANSWER 6 OF 9 MEDLINE on STN  
 AN 2002402556 MEDLINE  
 TI Chronic suppression of **heart**-failure progression by a  
 pseudophosphorylated mutant of phospholamban via in vivo **cardiac**  
 rAAV gene delivery.  
 SO Nature medicine, (2002 Aug) 8 (8) 864-71. Electronic Publication:  
 2002-07-22.  
 Journal code: 9502015. ISSN: 1078-8956.  
 AU Hoshijima Masahiko; **Ikeda Yasuhiro**; Iwanaga Yoshitaka;  
 Minamisawa Susumu; Date Moto-o; Gu Yusu; Iwatate Mitsuo; Li Manxiang; Wang  
 Lili; Wilson James M; Wang Yibin; Ross John Jr; Chien Kenneth R  
 AB The feasibility of **gene therapy** for  
**cardiomyopathy**, **heart** failure and other chronic  
**cardiac** muscle diseases is so far unproven. Here, we developed an  
 in vivo recombinant adeno-associated virus (rAAV) transcortical delivery  
 system that allows stable, high efficiency and relatively **cardiac**  
 -selective gene expression. We used rAAV to express a  
 pseudophosphorylated mutant of human phospholamban (PLN), a key regulator  
 of **cardiac** sarcoplasmic reticulum (SR) Ca(2+) cycling in BIO14.6  
**cardiomyopathic** hamsters. The rAAV/S16EPLN treatment enhanced  
 myocardial SR Ca(2+) uptake and suppressed progressive impairment of left  
 ventricular (LV) systolic function and contractility for 28-30 weeks,  
 thereby protecting **cardiac** myocytes from cytopathic  
 plasma-membrane disruption. Low LV systolic pressure and deterioration in  
 LV relaxation were also largely prevented by rAAV/S16EPLN treatment.  
 Thus, transcortical gene transfer of S16EPLN via rAAV vector is a  
 potential therapy for progressive dilated **cardiomyopathy** and  
 associated **heart** failure.
- L13 ANSWER 9 OF 9 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  
 AN 2000:303888 BIOSIS  
 TI In vivo **cardiac** gene transfer in hamsters using hypothermic  
**cardiac** arrest.  
 SO FASEB Journal, (March 15, 2000) Vol. 14, No. 4, pp. A420. print.  
 Meeting Info.: Annual Meeting of Professional Research Scientists:  
 Experimental Biology 2000. San Diego, California, USA. April 15-18, 2000.  
 Federation of American Societies for Experimental Biology.  
 CODEN: FAJOEC. ISSN: 0892-6638.  
 AU **Ikeda, Yasuhiro**; Gu, Yusu; Oh, Sam; Giordano, Frank J.;  
 Hoshijima, Masahiko; Chen, Ju; Peterson, Kirk L.; Ross, John, Jr.